



1/20

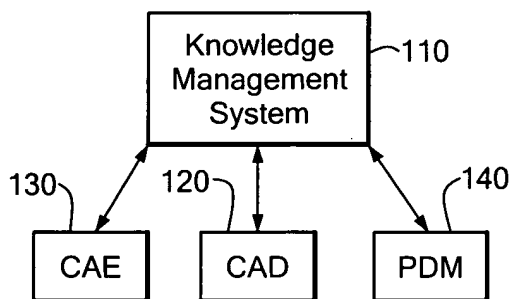


FIG. 1

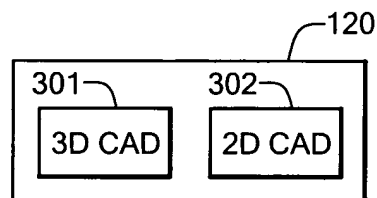


FIG. 3A

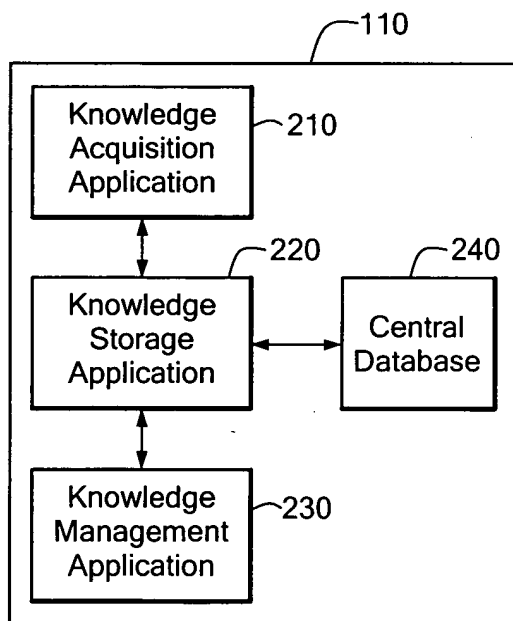


FIG. 2

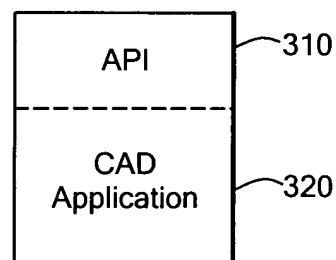
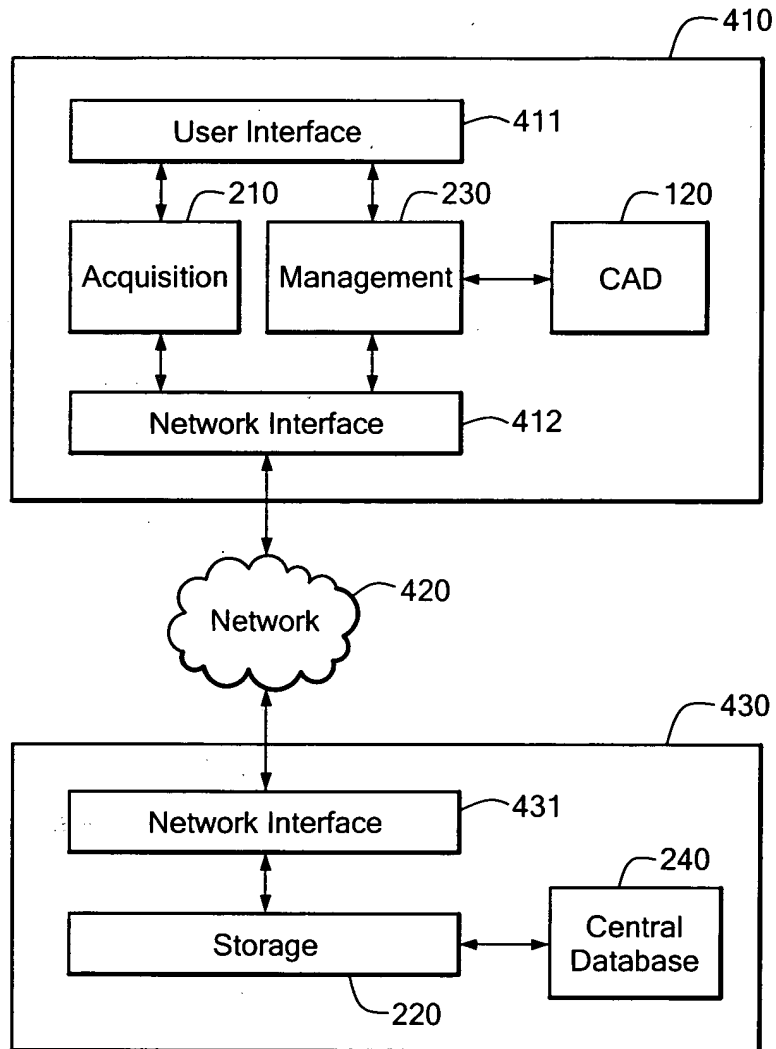


FIG. 3B

2/20



400

FIG. 4

3/20

FIG. 5

RuleStream nAct Expert

File Edit View Help

File Edit View Help

Application Fan Design

BuildingServicesFan: MountingAssembly

Subscribed to

Description

Knowledge Source

Status

In Development

Last Updated

NAVION\jdrake 7/22/2002 11:45:02 AM

Part Family - Tree

BuildingServicesFan

FanAssembly

Rotor

HousingAssembly

Housing

MotorAssembly

Motor

MountingAssembly

Mounting

Display Name *

Mounting Assembly

System Name *

MountingAssembly

Subpart Type *

Static

Category *

General

Valid Part Families *

Mounting

531

Context

BuildingServicesFan

Optimal Part Family *

User Edit Follow Part Number

result = "Mounting"

532

Quantity

Exists When *

Part Names *

When Changed *

Documentation

* Required

510

All Specs (Alphabetical)

Density^L

FanArea^L

FanAssembly^L

FanDiameter^L

FanPressure^L

FrequentStartStop^L

HousingAssembly^L

MotorAssembly^L

MountingAssembly^L

PartNumber^M

SolidWorks^L

SpecifiedSpeed^L

SquareFlange^L

VolumeFlowRate^L

520

500

540

530

4/20

600

630

610

620

631

633

632

630

FIG. 6

RuleStream nAct Expert

File Edit View Help

Part Family - Tree

- BuildingServicesFan
- FanAssembly
 - Rotor
 - HousingAssembly
 - Housing
 - MotorAssembly
 - Motor
 - MountingAssembly
 - Mounting

610

Geometry Type *

SolidWorks

Valid Part Files *

Pattern

632

+

X

Subscribed To

Status

In Development

Last Updated

NAVION\gsmith 3/17/2003 2:33:47 PM

Context

On Mounting

Optimal Part File

Component Name

Orientation

User Edit

Add Mate

Fix Position

Preference

Edit

Copy

Delete

Move Up

Move Down

Documentation

* Required

Properties (Double-click a property to open)

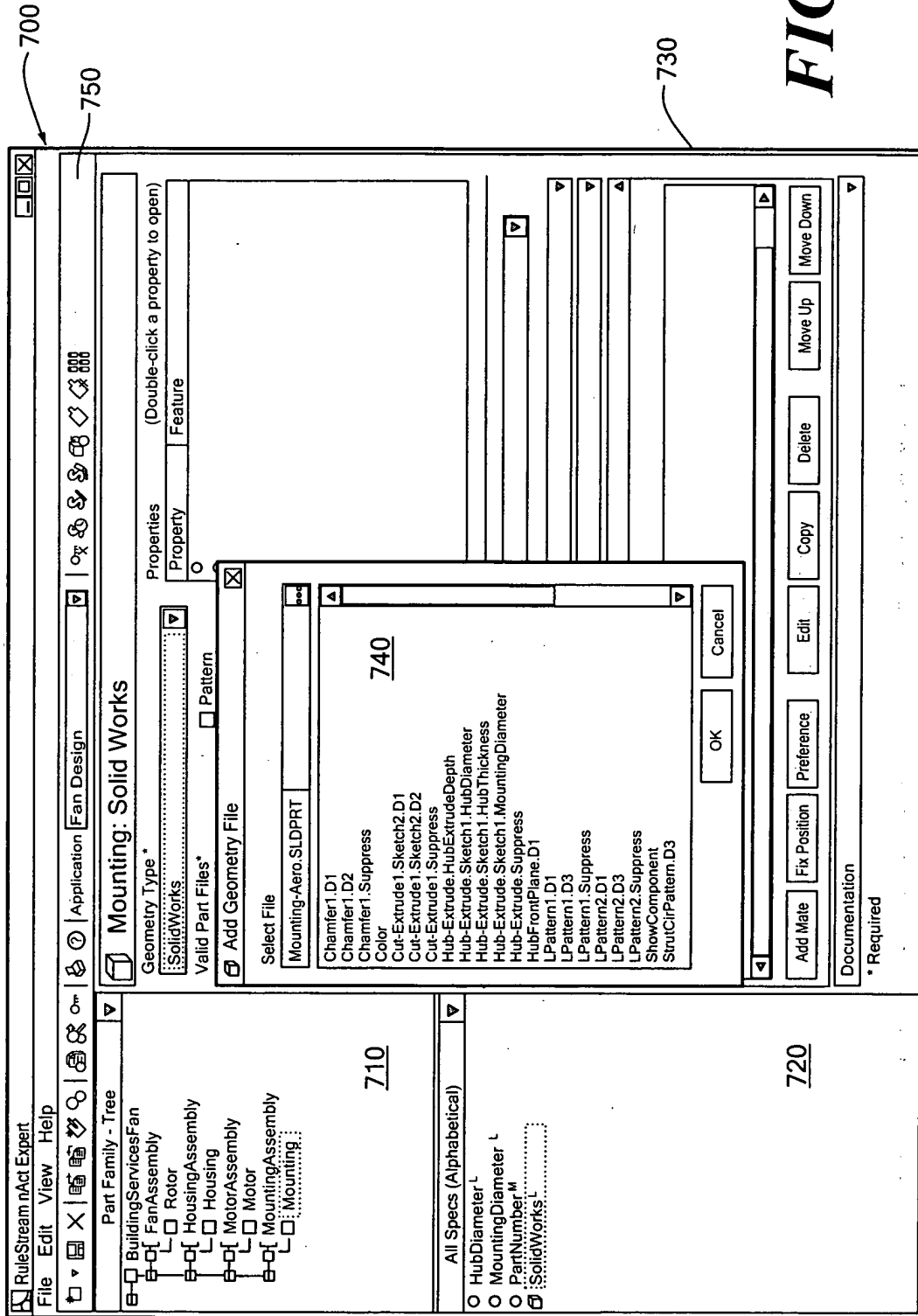
Property

Feature

631

633

5/20



6/20

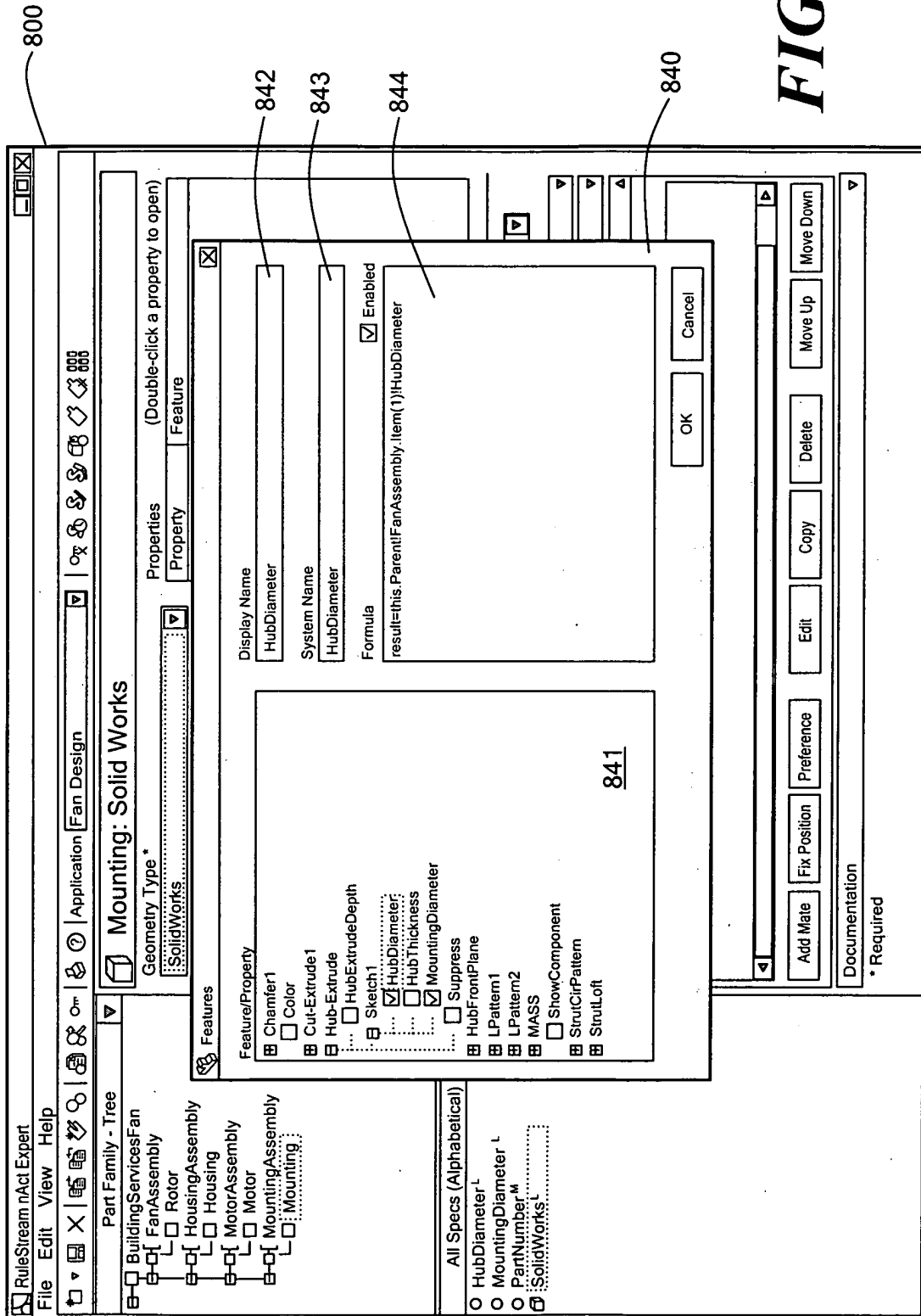


FIG. 8

7/20

FIG. 9

900

950

931

930

910

920

RuleStream nAct Expert
File Edit View Help

Part Family - Tree

- BuildingServicesFan
 - FanAssembly
 - Rotor
 - HousingAssembly
 - Housing
 - MotorAssembly
 - Motor
 - MountingAssembly
 - Mounting

Application Fan Design

Mounting: Solid Works

Geometry Type *
SolidWorks

Valid Part Files*
Mounting-Aero.SLDPRT

Pattern

Properties (Double-click a property to open)

Property	Feature
HubDiameter	Hub-Extrude.Sketch1.HubDiameter
MountingDiameter	Hub-Extrude.Sketch1.MountingDiameter

Subscribed To

Status

In Development

Last Updated
NAVION\gsmith 3/17/2003 2:33:47 PM

Context
Mounting

Optimal Part File

Component Name

Orientation

User Edit

Add Mate

Fix Position

Preference

Edit

Delete

Copy

Move Up

Move Down

Documentation

* Required

All Specs (Alphabetical)

- HubDiameter^L
- MountingDiameter^L
- PartNumber^M
- SolidWorks^L

8/20

FIG. 10

1000

1030

1010

1020

1040

RuleStream nAct Expert
File Edit View Help
Application Fan Design
Part Family - Tree
BuildingServicesFan
FanAssembly
Rotor
HousingAssembly
Housing
MotorAssembly
Motor
MountingAssembly
Mounting
Mounting: Solid Works
Geometry Type *
SolidWorks
Valid Part Files *
Mounting-Aero.SLDPRT
Geometry Mating
Part 1
Feature Type
Feature Name
Part 2
Feature Type
Feature Name
Mate Type
Distance
Angle
Alignment
Add Mate
Fix Position
Preference
Edit
Copy
Delete
Move Up
Move Down
Documentation
* Required

9/20

RuleStream nAct Expert
File Edit View Help

Part Family - Tree

BuildingServicesFan

FanAssembly

Rotor

HousingAssembly

Housing

MotorAssembly

Motor

MountingAssembly

Mounting

1110

Application Fan Design

Mounting: Solid Works

Geometry Type *
SolidWorks

Valid Part Files*
Mounting-Aero.SLDprt

Pattern

Properties (Double-click a property to open)

Property	Feature
HubDiameter	Hub-Extrude.Sketch1.HubDiameter
MountingDiameter	Hub-Extrude.Sketch1.MountingDiameter

Subscribed To

Status

In Development

Last Updated
NAVIONgsmith 3/17/2003 2:33:47 PM

Context
Om Mounting

Optimal Part File

Component Name

Orientation

☐ User Edit

AddMate this, "PLANE", "Front", this parentHousingAssembly(1), "PLANE", "Front", swMateAlignALIGNED, FALSE, AddMate this, "PLANE", "Right", this parentHousingAssembly(1), "PLANE", "Right", swMateAlignALIGNED, FALSE, AddMate this, "PLANE", "Top", this parentHousingAssembly(1), "PLANE", "Top", swMateAlignALIGNED, FALSE, 0.

Add Mate

Fix Position

Preference

Edit

Copy

Delete

Move Up

Move Down

Documentation
* Required

1120

All Specs (Alphabetical)

HubDiameter^L

MountingDiameter^L

PartNumber^M

SolidWorks^L

FIG. 11

10/20

FIG. 12

RuleStream nAct Expert
File Edit View Help

Part Family - Tree
BuildingServicesFan
FanAssembly
Rotor
HousingAssembly
Housing
MotorAssembly
Motor
MountingAssembly
Mounting

1210

BuildingServicesFan: FanArea

Display Name *
Fan Area

System Name *
FanArea

Property Type *
Formula Driven

Data Type *
Double

Units
m^2(metres^2)

Category *
Requirements

Subscribed to

Description

Knowledge Source

Status
Released

Last Updated
GROGAN\bgrogan 8/22/2002 10:53:22 AM

Context
BuildingServicesFan

Formula
☐ Auto Revert ☐ Follow Part Number
If this\FanDiameter > 0 Then
result = 3.141 * (this\FanDiameter / 2)^2
Else
result = 0
Else

User Interface

Valid Values

When Changed

Database Constraint

Documentation
* Required

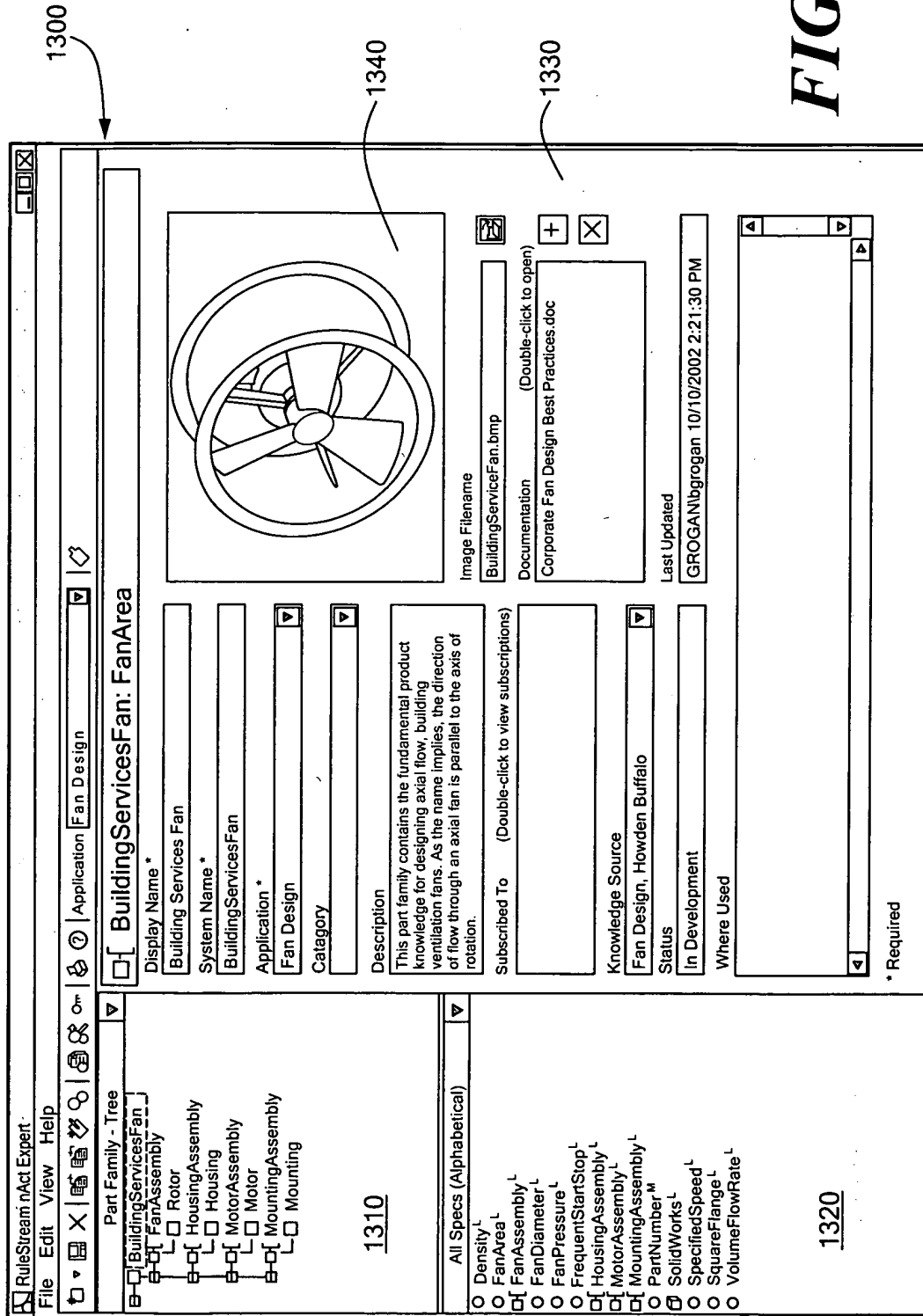
1220

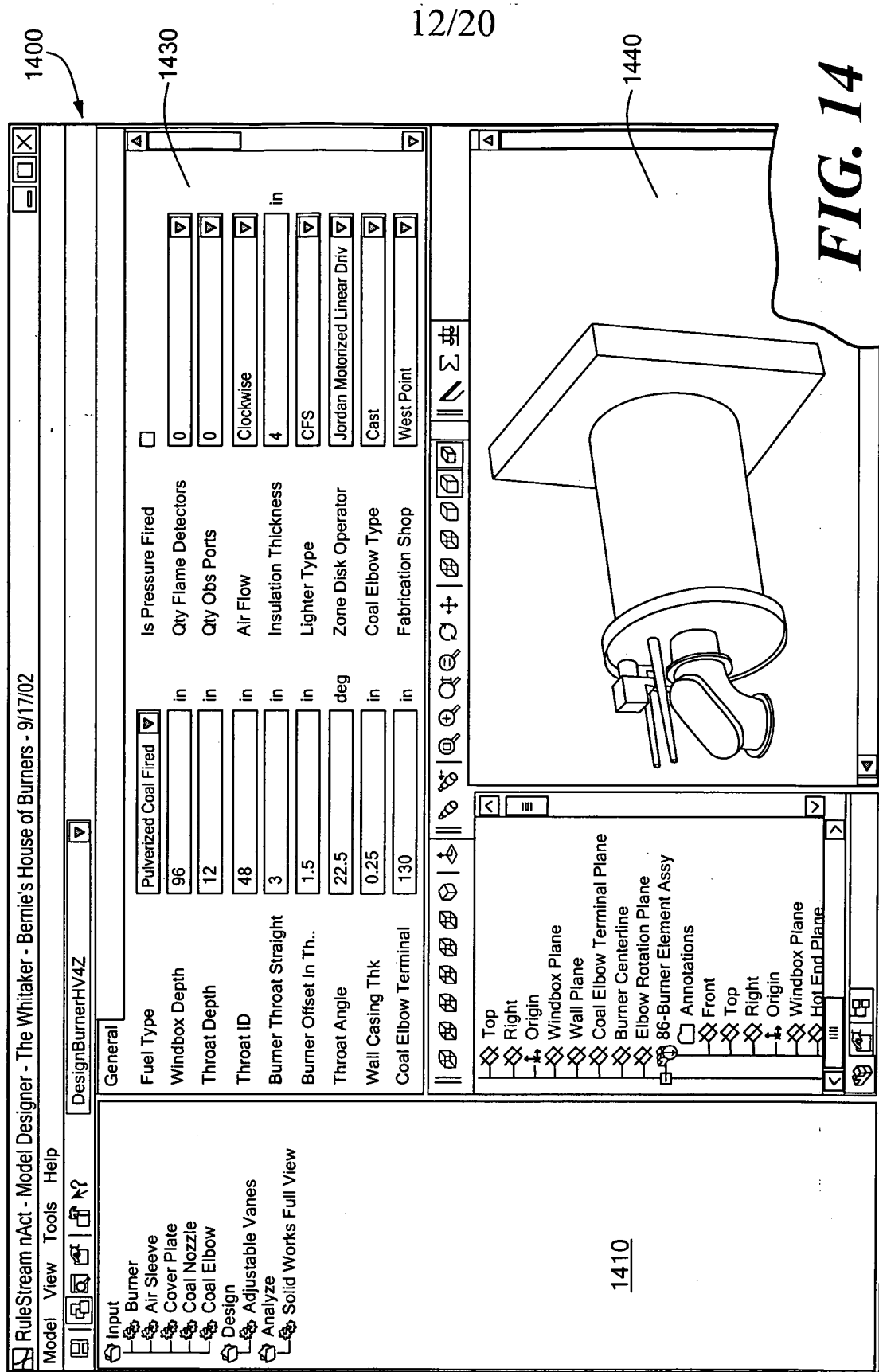
All Specs (Alphabetical)

- Density^L
- FanArea^L
- FanAssembly^L
- FanDiameter^L
- FanPressure^L
- FrequentStartStop^L
- HousingAssembly^L
- MotorAssembly^L
- MountingAssembly^L
- PartNumber^M
- SolidWorks^L
- SpecifiedSpeed^L
- SquareFlange^L
- VolumeFlowRate^L

11/20

FIG. 13





13/20

1500

RuleStream nAct - Model Designer - The Whitaker - Burner Buyer 1/2/03

Model View Tools Help

DesignBurnerHV4Z

General

Input

- Burner
- Air Sleeve
- Cover Plate
- Coal Nozzle
- Lighter
- Coal Elbow

Design

- Burner Optim
- Adjustable Va
- Adjustable Va
- Adjustable Va
- Fixed Vanes O
- Fixed Vanes In

Analyze

- Solid Works F

Fuel Type

Pulverized Coal Fired

Air Flow

Insulation Thickness

Is Pressure Fired

Coal Elbow Termin..

Windbox Depth

Throat Angle

Throat ID Existing

Throat ID New

Throat Depth New

Wall Casing Thk

Wall Tube CO

Throat Straight

Burner Offset in Th..

Coal Elbow Type

Zone Disk Operator

Qty Flame Detect..

Qty Obs Ports

0

0.25

3

1.8125

1.8125

Cast

Jordan Motorized Lin..

1

1

1530

130

96

22.5

48

48

DesignBurnerHV4Z (Design)

- Burner Element Assembly
- Coal Elbow
- Deflector
- Diffuser
- Distribution Cone
- Extended Throat Assembly
- Impeller Assembly
- Lighter
- Lighter Spray Calc
- Main Damper Drive

1520

1510

Design Burner Assembly

- Annotations
- Lighting
- Front
- Top
- Right
- Origin
- Equations
- Windbox Plane
- Wall Plane
- Coal Elbow Terminal
- Burner Centerline
- Elbow Rotation Plane
- Windbox Graphics<1>
- rope packing<1>

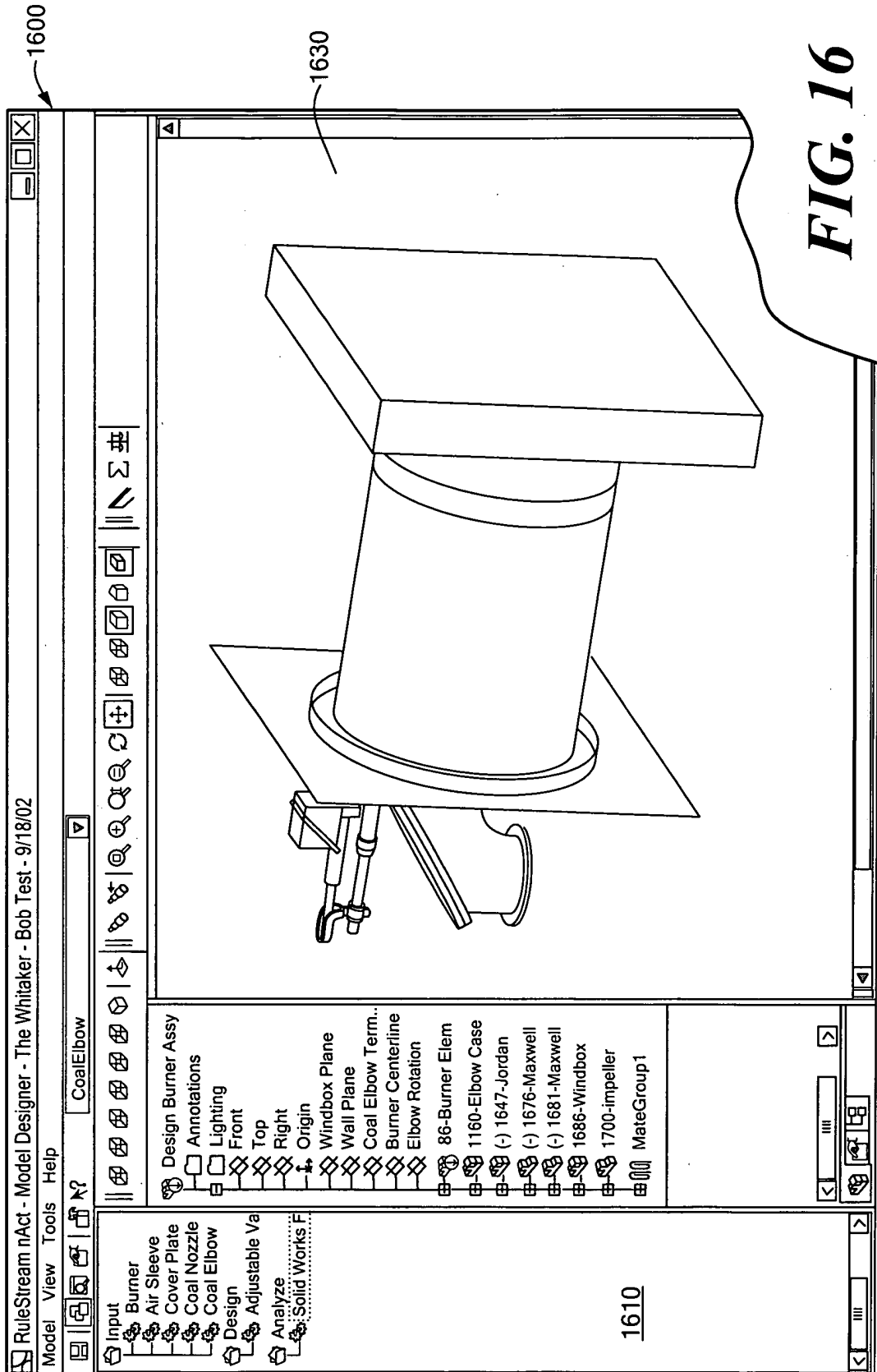
1540

1550

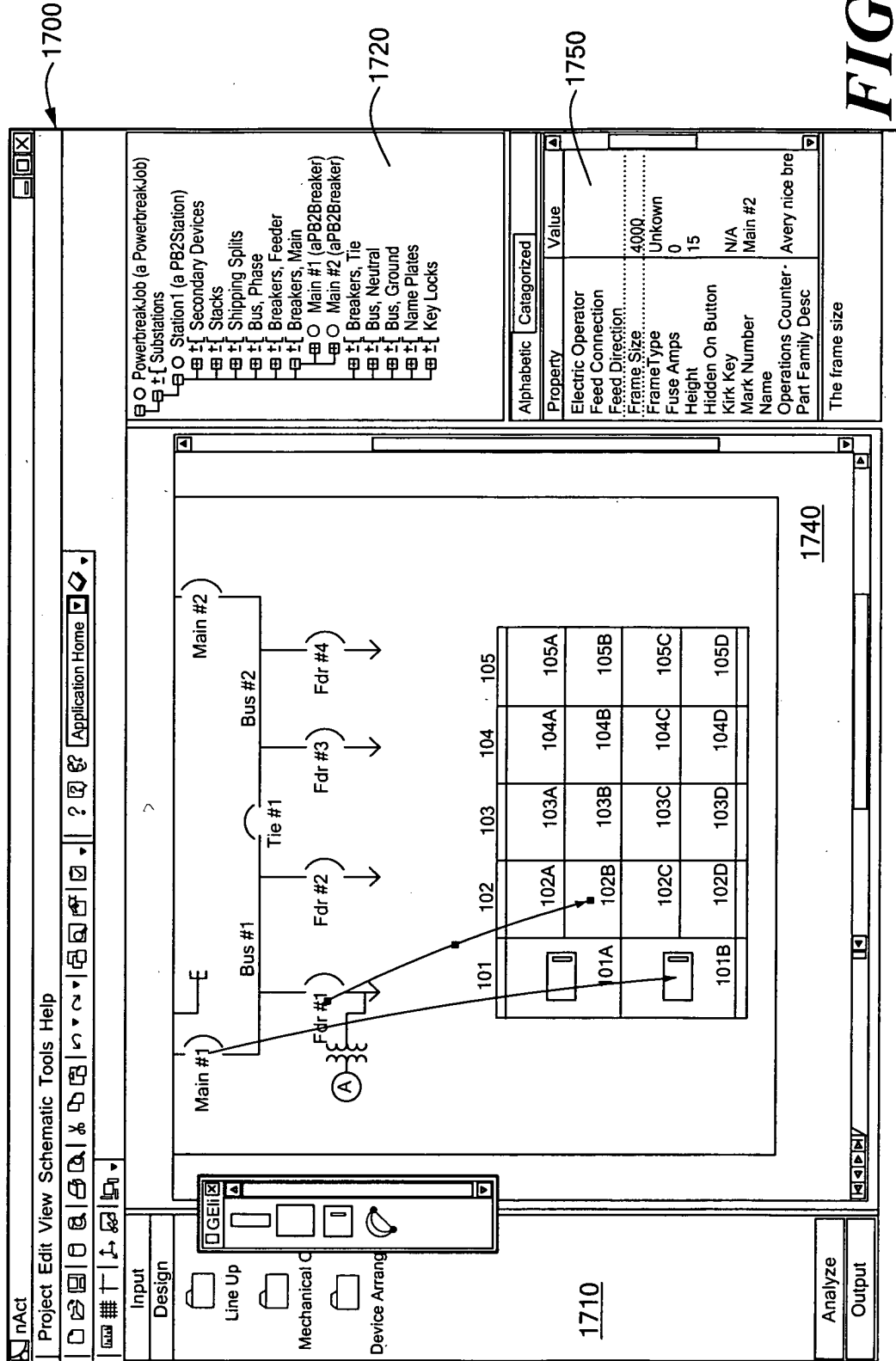
Property	Value
Air Flow	Clockwise
Burner Offset	1.8125
Coal Elbow Ter	130
Coal Elbow Typ	Cast
Current Date	1/2/2003
Current Process	Design Eng
Current Process	Input/Burn
Customer ID	0
Customer Name	Burner buy
Fuel Type	Pulverized
Insulation Thic	4
Is Pressure Fin	False
Name	DesignBurn
Obs Parts Fuh	False
Part Fami	False

FIG. 15

14/20



15/20





17/20

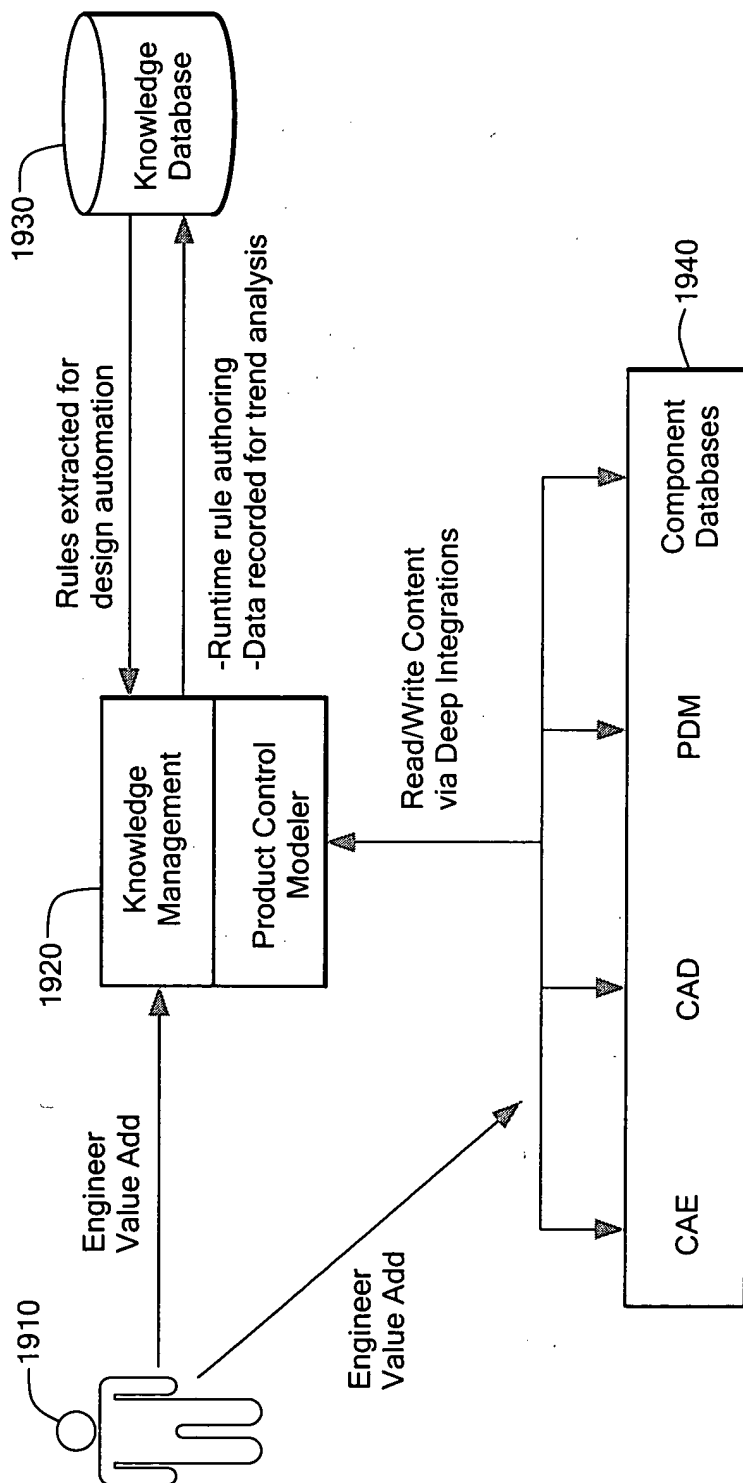


FIG. 19

18/20

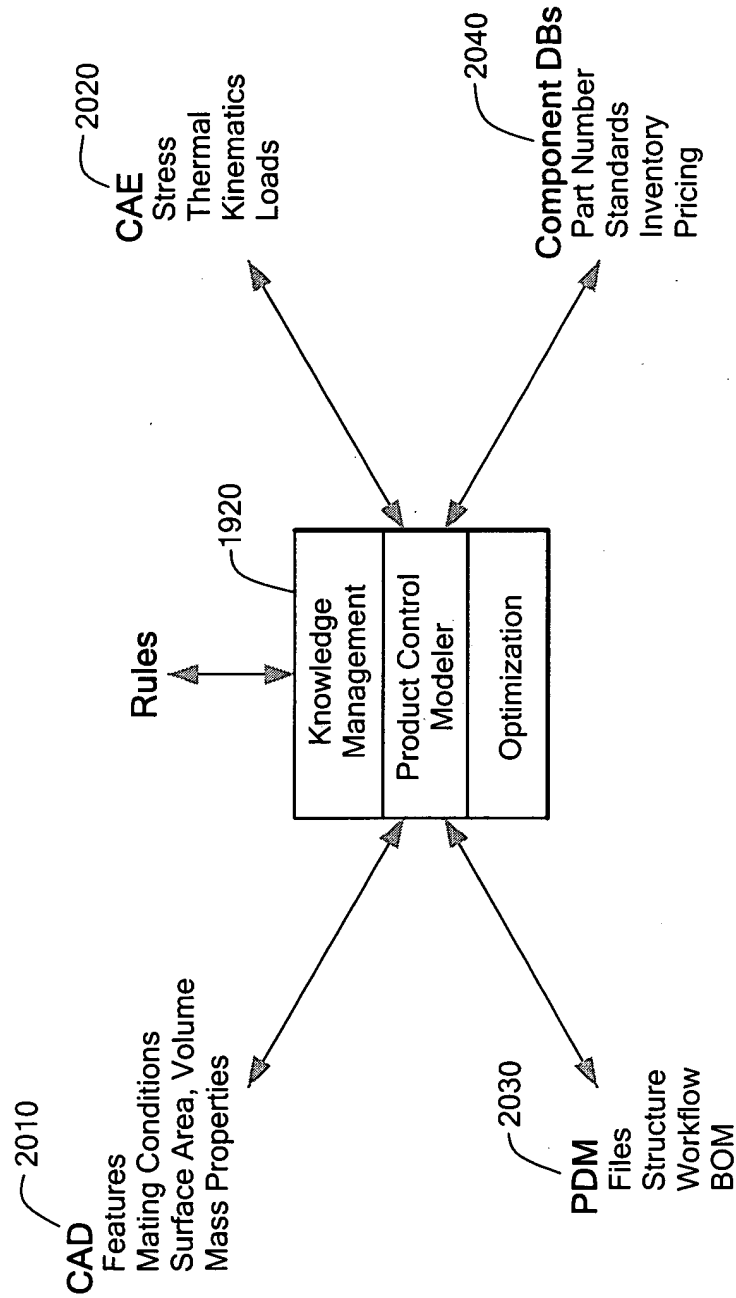


FIG. 20

19/20

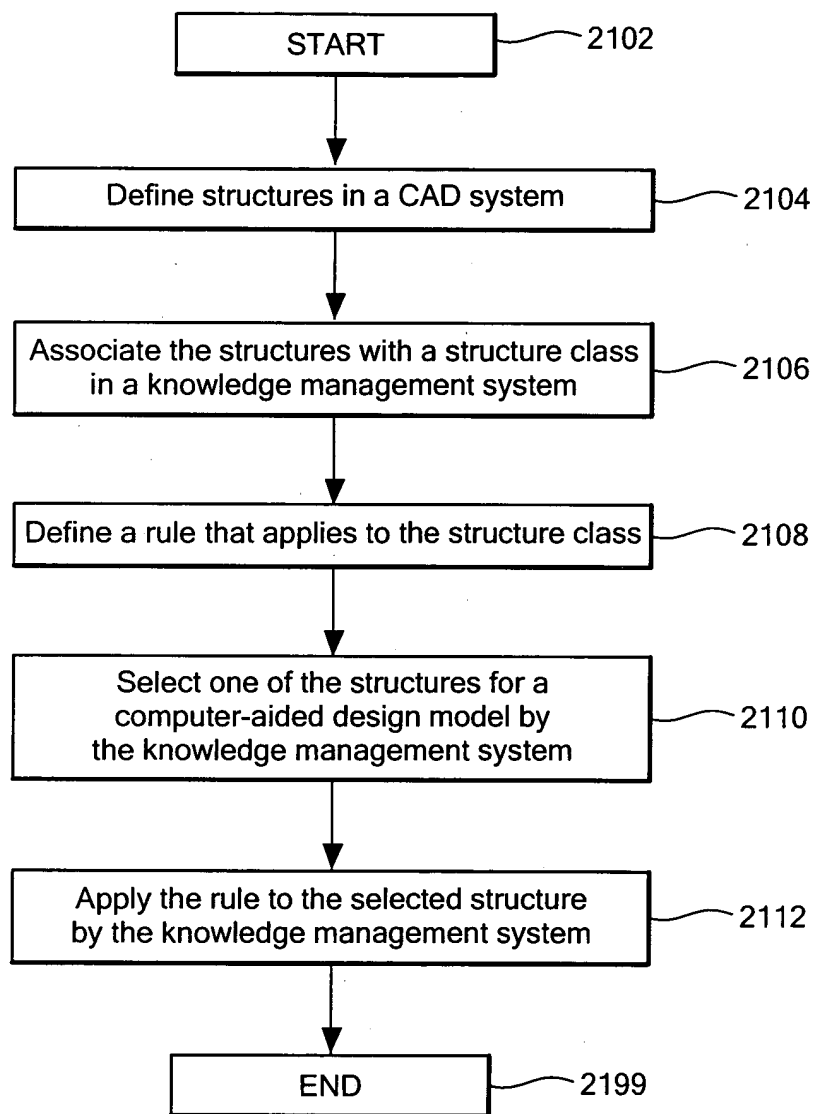
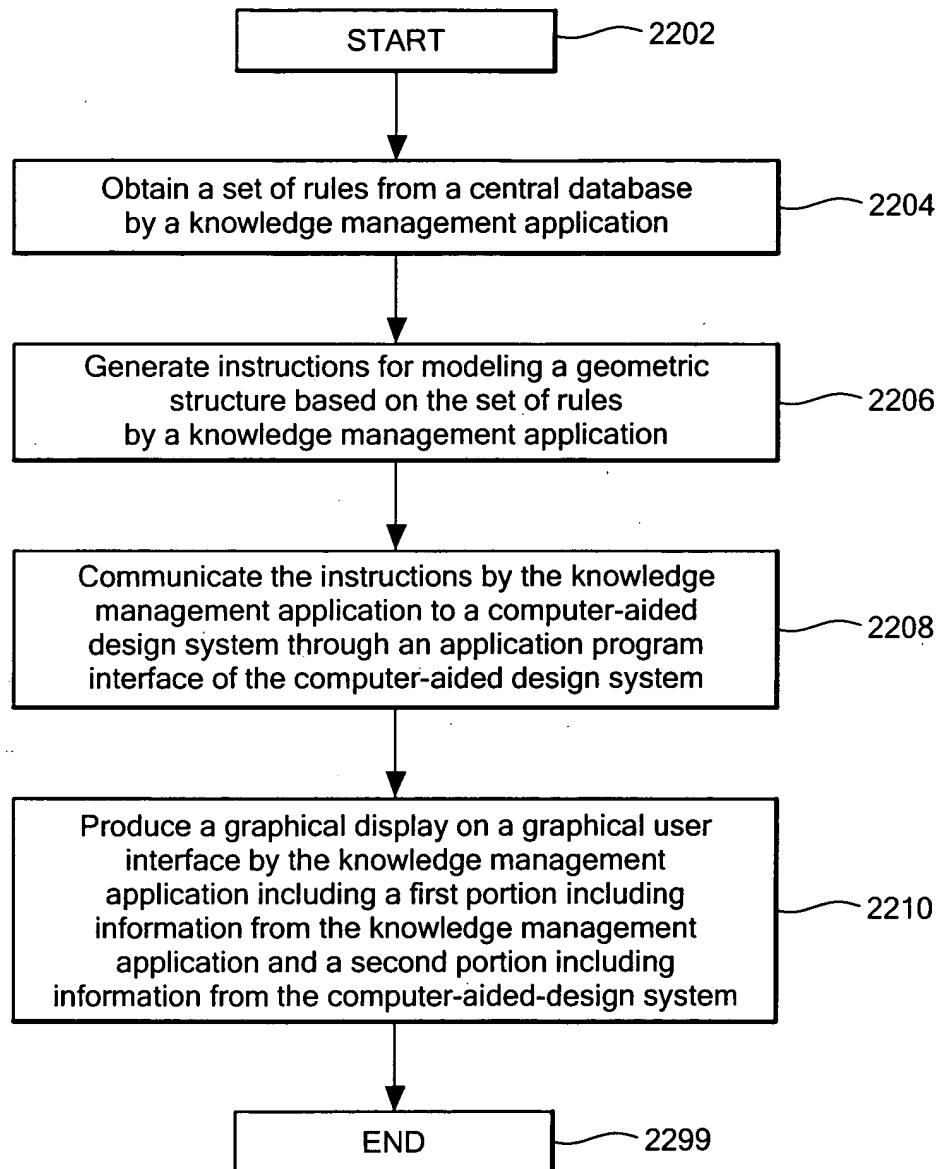


FIG. 21

2100

20/20



2200

FIG. 22